UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,410	11/04/2005	Andrew Blackmore	P/63751	6767

156   7590   06/15/2009
Kirschstein, Israel, Schiffmiller & Pieroni, P.C.
425 FIFTH AVENUE
5TH FLOOR
NEW YORK, NY 10016-2223

EXAMINER
RECEK, JASON D

ART UNIT	PAPER NUMBER
2442	

MAIL DATE	DELIVERY MODE
06/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/529,410	BLACKMORE, ANDREW
	Examiner	Art Unit
	JASON RECEK	2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2009*.
2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *87-129* is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *87-129* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☐ All　b)☐ Some * c)☐ None of:
　　　1.☐ Certified copies of the priority documents have been received.
　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

This is in response to the arguments filed on March 30th 2009.

Status of Claims

Claims 87-129 are pending.

Claims 87-129 are rejected under 35 U.S.C. 103(a).

Response to Arguments

1.   Applicant's arguments filed 3/30/09 have been fully considered but they are not

persuasive. Applicant argues that Fan does not disclose "polling regularly by a NE at

least one other NE" as recited by the independent claims and that the examiner's

interpretation is overly broad (pg. 2-3). This argument is not persuasive because Fan

does disclose "polling". Whether or not examiner's initial interpretation was overly

broad, as suggested by applicant, is irrelevant because Fan also discloses applicant's

definition of polling "NE1, at regular intervals, **requests** some information from NE2"

recited on pg. 3 of the arguments. See Fan Fig. 9 items 1A, 1B and col. 14 ln. 5-8, it

teaches "Periodically **monitor** links with neighboring nodes" and "Periodically **requests**

them (neighbor information messages) with neighbor **request** messages". Thus Fan

discloses "polling" under either interpretation (actively requesting, or passively checking

status). Thus, Fan discloses "polling regularly by a NE at least one other NE" as recited by the independent claims.

Applicant also argues that Dev and Jain do not suggest "receiving by a network management system a notification from the NE in the network of a down status of one of the neighboring NEs" (pg. 3-4). First, this argument is not persuasive as a matter of law because the claim is rejected using the combination of Dev, Jain and Fan. Showing that a subset of the combination does not teach something is not sufficient. However, examiner appreciates applicant's position since only Dev and Jain were referred to in the rejection. Unfortunately, this argument is still not persuasive. Jain teaches propagating faults throughout a network (abstract), when combined with the NMS of Dev, this combination suggests to one of ordinary skill in the art that a fault notification would be sent to the NMS since it is part of the network. Even if applicant's argument concerning Dev and Jain were persuasive, it would not overcome the rejection because Fan clearly discloses sending notifications from a NE to a network management system (see Fan col. 10 ln. 52-53, col. 12 ln. 19-22 and col. 14 ln. 64-66).

Applicant's statement that any amendment to step (a) would be dismissed as one that adds subject matter not disclosed in the application as filed has been noted.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 87-95 and 100-129 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Dev et al. U.S. Pat. 5,261,044 in view of Jain US 2002/0116669 A1

and Fan et al. US 6,643,269 B1.

Regarding claim 87, Dev discloses "a method of monitoring a status of network

elements" as a network management system (abstract), "identifying the at least one

other NE which is linked to the NE" as determining adjacent network elements (col. 11

ln. 17-24), and "polling by the network management system one of the NE and the at

least one other NE to determine the status thereof" as polling network devices (col. 11

ln. 30-34), applicant admits in arguments (pg. 10) that Dev's disclosure teaches the

network management system (i.e. a model representing device) polling a device.

Dev does not explicitly disclose "receiving by a network management system a

notification from the NE in the network of a down status of one of the neighboring NEs"

however this is taught by Jain as network nodes reporting faults of their neighbors

(abstract, Fig. 4, paragraphs 14-15).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Dev with the fault reporting taught by Jain for the purpose of

discovering faults. Dev suggests that network devices automatically report significant events (col. 7 ln. 54-59). One of ordinary skill in the art would consider the failure of a node to be a significant event. Jain also teaches that by reporting faults a network is able to recover (paragraph 19). Given this motivation, it would have been obvious for network elements to report if their neighbors had a fault. Also, see Fan col. 10 ln. 52-53, col. 12 ln. 19-22 and col. 14 ln. 64-66, as discussed in the response to arguments, the motivation to combine is given below.

The combination of Dev and Jain does not explicitly disclose "polling regularly by a NE at least one other NE which is linked to the NE" however this is taught by Fan as neighboring nodes monitoring and requesting status from each other (col. 3 ln. 6-19, Fig. 9 items 1A, 1B and col. 14 ln. 5-8) .

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Dev and Jain with the polling taught by Fan for the purpose of checking the status of a neighboring node. By polling regularly as disclosed by Fan a change of status can be detected. This allows for the automatic reconfiguration of a network so that the network can keep functioning properly. This is a clearly recognized advantage.

Regarding claims 88-89, Dev discloses "in which the status of the NE is operational" and "in which the status of the NE is non-operational" as sending operational status (col. 5 ln. 36-40).

Regarding claim 90, Dev discloses "the down status notification is received from

the NE if the NE determines that the status of the at least one other NE linked thereto is

non-operational" as a failure status may be received due to another device failing (col.

10 ln. 67 – col. 11 ln. 7).

Regarding claim 91, Dev discloses "each NE polls one of the NE and the at least

one other NE linked thereto to determine the status of the at least one other NE" as a

network device that polls adjacent network devices to determine status information (col.

11 ln. 17-22, ln. 34-37).

Regarding claim 92, Dev discloses "each NE polls one of the NE and the at least

one other NE linked thereto by signaling to the at least one other NE, using a signaling

protocol" as using a communication protocol for polling (col. 7 ln. 34-39).

Regarding claims 93-94, Dev discloses "if one of the NE and the at least one

other NE replies, the status is considered to be operational" and "if the one of the NE

and the at least one other NE does not reply, its status is considered to be non-

operational" as considering a device operational if a reply is returned (col. 9 ln. 18-21)

and considering a device to be faulty if no reply is received (col. 9 ln. 33-36).

Regarding claim 95, Dev discloses "the down status notification contains information on the NE which has output the notification" as a status information message that contains information about the NE (col. 5 ln. 36-40).

Regarding claims 100-101, Dev discloses "the down status notification is received using a signaling protocol" and "the signaling protocol comprises a simple network management protocol (SNMP)" as using a common network protocol for communication such as SNMP (col. 4 ln. 23-31).

Regarding claim 102, Dev discloses "the identifying step comprises accessing the down status notification to obtain information on the NE which has output the notification" as processing the information received form the network device (col. 5 ln. 36-38) which includes information on the NE (col. 5 ln. 38-40).

Regarding claim 103, Dev discloses "the identifying step comprises accessing a links database containing details of each NE and the at least one other NE linked thereto" as a network management system includes a database that holds information concerning the network devices (col. 4 ln. 13-18), and "using the information to obtain the identification of the one of the NE and the at least one other NE" as accessing the database to retrieve messages that contain identification information (col. 8 ln. 26-33).

Regarding claim 104, Dev discloses "the identifying step comprises accessing the links database" as accessing the database to retrieve messages that contain identification information (col. 8 ln. 26-33). The combination of Dev and Jain does not specifically disclose "using the information to obtain an internet protocol (IP) address of one of the NE and the at least one other NE" however Dev teaches using SNMP (col. 4 ln. 28-29) which uses IP addresses to identify network devices. It would have been obvious to one of ordinary skill in the art at the time of the invention to extract the IP address from the database for the purpose of identifying the specific device. The motivation for doing so is to clearly identify the network entity for which information is being provided (col. 2 ln. 18-20).

Regarding claim 105, Dev discloses "the polling step comprises sending at least one simple network management protocol (SNMP) get request to the NE" as using SNMP for communication (col. 4 ln. 28-30) and polling (col. 7 ln. 32-34).

Regarding claim 106, Dev discloses "the polling step comprises using the SNMP" as using SNMP for communication (col. 2 ln. 18-20). Dev does not explicitly disclose using SNMP "over transmission control protocol/internet protocol (TCP/IP)" however Jain teaches this as equipment that uses TCP/IP to pass data (paragraph 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dev by using TCP/IP taught by Jain for the purpose of

communicating over the network. TCP/IP is a known technique that produces

predictable results.

Regarding claim 107, Dev discloses "using a network management system

(NMS) of the telecommunication network" as using a network management system on

the network (abstract, col. 3 ln. 66 – col. 4 ln. 5, Fig. 1).

Regarding claim 108, Dev discloses "the NMS comprises a fault manager

module" as a NMS that can handle faults (col. 10 ln. 1-2, col. 11 ln. 12-14).

Regarding claim 109, Dev discloses "the fault manager module receives the

down status notification from the NE" as a network management system which handles

faults receives the status notification from the network device (col. 7 ln. 54-58).

Regarding claim 110, Dev discloses "the fault manager module places the down

status notification in a notification database of the NMS" as a network management

system that places notifications into a database (col. 3 ln. 68 – col. 4 ln. 2, col. 2 ln. 13-

18, col. 8 ln. 21-25, Fig. 1).

Regarding claim 111, Dev discloses "the fault manager module outputs a

message on receipt of the down status notification" as outputting an alarm to the user

when an error is received (col. 9 ln. 26-30).

Regarding claim 112, Dev discloses "the NMS comprises a monitoring module"

as a device communication manager (Fig. 1) that communicates with network devices

(col. 4 ln. 18-21). When network devices automatically send status updates (col. 7 ln.

54-58) this device is in a monitoring mode.

Regarding claim 113, Dev discloses "the monitoring module receives a message

output from the fault manager module when it receives the down status notification" as

the communication module receives a request to poll from the fault manager (col. 7 ln.

34-36) when the fault manager receives a status notification (col. 11 ln. 17-22), this

request to poll is a message.

Regarding claim 114, Dev discloses "the monitoring module accesses the down

status notification, to obtain information on the NE which has output the notification" as

the communication module extracts information from the notification (col. 7 ln. 39-44).

Regarding claim 115, Dev discloses "the monitoring module accesses a links

database of the NMS containing details of each NE and the at least one other NE linked

thereto" as a database that contains details of each network device (col. 4ln. 13-18) and

is accessed by the NMS (col. 8 ln. 16-20), "and uses the information to obtain the

identification of one of the NE and each other NE" as getting information from the

database for the purposes of identification (col. 10 ln. 41-61).

Regarding claim 116, Dev discloses "the monitoring module polls one of the NE

and each other NE to determine the status thereof" as polling networking devices (col. 5

ln. 31-34).

Regarding claim 117, Dev discloses "the monitoring module determines the

status of at least one NE of the network, and adds status information to a status

database of the NMS" as polling to determine status (col. 5 ln. 31-34) and storing

information in a database (col. 8 ln. 21-25).

Regarding claim 118, Dev discloses "the NMS comprises a graphical user

interface (GUI) module" as a user interface that is window-based (col. 12 ln. 64-68).

Regarding claim 119, Dev discloses "the GUI module is used to report the status

of one of the NE and the at least one other NE of the network to a customer of the

network" as providing status reports through the user interface (col. 4 ln. 2-9).

Regarding claim 120, Dev discloses "the NEs in the telecommunication network

comprise nodes, switches and routers" as network devices such as bridges and routers

(col. 5 ln. 44-47).

Regarding claim 121, it is a device claim that corresponds to the method claim 87, it is therefore rejected for similar reasons.

Regarding claim 122, it is a computer readable medium claim that corresponds to claim 87 (as indicated by applicant on pg. 11 of response on 1/14/08) and is therefore rejected for similar reasons.

Regarding claim 123, Dev discloses a computer program product "comprised in a network management system (NMS) of the telecommunication network" as a network management system running on a computer (col. 4 ln. 58 – col. 5 ln. 6).

Regarding claim 124, Dev discloses "means for receiving the down status notification from the NE of the network comprises a fault manager module of the NMS" as a NMS that can handle faults (col. 10 ln. 1-2, col. 11 ln. 12-14).

Regarding claim 125, Dev discloses "means for identifying the at least one other NE which is linked to the NE comprises a monitoring module of the NMS" as a device communication manager (Fig. 1) that communicates with network devices (col. 4 ln. 18-21).

Regarding claim 126, Dev discloses "means for polling comprises the monitoring module of the NMS" as polling networking devices (col. 7 ln. 34-37).

Regarding claim 127, it is a system claim that correspond to the computer readable medium of claim 122, it is therefore rejected for similar reasons.

Regarding claim 128, it is a system claim that corresponds to the method claim 87 and is therefore rejected for similar reasons.

Regarding claim 129, it is a computer readable medium claim that corresponds to the method of claim 87, therefore it is rejected for similar reasons.

3.   Claims 96-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dev, Jain and Fan in view of Walker et al. 6,061,723.

Regarding claim 96, Dev discloses "the down status notification is received from a NE" as a NE sends a status notification (col. 7 ln. 54-57), however the combination of Dev, Jain and Fan does not specifically disclose sending a status notification when "the NE determines that a status of an interface thereof linked to at least one other NE is non-operational" this is taught by Walker as analyzing the status of network interfaces (col. 5 ln. 61-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dev with the interface status monitoring ability taught by Walker.

The motivation for doing so is to aid the network administrator in their effort to identify

and fix network failures (Walker col. 4 ln. 19-23).

Regarding claim 97, Dev discloses "the status of the interface is non-operational

if the status of the one of the NE and the at least one other NE linked to the interface is

non-operational" When a NE is non-operational the network device will not be able to

make contact with that NE over the interface, thus when a NE becomes non-operational

the interface is also non-operational and a status message is sent (col. 10 ln. 67 – col.

11 ln. 7, col. 7 ln. 54-58).

Regarding claim 98, Dev discloses "the down status notification contains

information on the NE which has output the notification" as a status message containing

information about the network device (col. 5 ln. 34-40), however the combination of Dev,

Jain and Fan does not disclose "and information on the interface of the NE which is

non-operational" this is taught by Walker as sending information to a network

administrator concerning the network interface (col. 5 ln. 52-63).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the combination of Dev, Jain and Fan with the interface status

monitoring ability taught by Walker. The motivation for doing so is to aid the network

administrator in their effort to identify and fix network failures (Walker col. 4 ln. 19-23).

Regarding claim 99, Dev discloses "the interface comprises a hardware port" as interfaces that connect the network devices (col. 5 ln. 20-22, Fig. 2). Dev does not specifically disclose "and the down status notification comprises a hardware port down trap" however Dev discloses using Simple Network Management Protocol (col. 4 ln. 27-29) which is commonly used to issue traps, thus having a down trap in a status message would have been obvious to one of ordinary skill in the art at the time of the invention for the purpose of notifying a network administrator that there was a problem with the network. Such use of a down trap in a status message is a known technique that yields predictable results.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Connor et al. US 2003/0202524 A1 discloses nodes polling their neighbors (paragraph 25).

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON RECEK whose telephone number is (571)270-1975. The examiner can normally be reached on Mon - Fri 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Caldwell/
Supervisory Patent Examiner, Art
Unit 2442

/Jason Recek/
Examiner, Art Unit 2442
(571) 270-1975